



**Middle Island**  
RESOURCES LIMITED

Middle Island Resources Limited  
ACN 142 361 608  
Suite 1, 2 Richardson Street  
West Perth WA 6005  
PO Box 1017  
West Perth WA 6872  
Tel +61 (08) 9322 1430  
Fax +61 (08) 9322 1474  
info@middleisland.com.au  
www.middleisland.com.au

## QUARTERLY REPORT

For the period ended 30 September 2018

### HIGHLIGHTS

**Middle Island Resources Ltd**  
ACN 142 361 608

**ASX Code: MDI**

**Office:**

Suite 1, 2 Richardson Street  
WEST PERTH WA 6005  
Western Australia

**Postal Address:**

PO Box 1017  
West Perth WA 6872  
Western Australia

T: +61 8 9322 1430

F: +61 8 9322 1474

E: info@middleisland.com.au

[www.middleisland.com.au](http://www.middleisland.com.au)

**Capital Structure:**

796 million shares  
38,300,000 options

**Board Members:**

**Peter Thomas**

Chairman

**Rick Yeates**

Managing Director

**Beau Nicholls**

Non-Executive Director

**Dennis Wilkins**

Company Secretary

- Cash and liquid investments as at 30 September 2018 were A\$1.12M.
- Final gold assay results received from RC pre-collared, resource definition diamond core drilling of the upper half of the Two Mile Hill tonalite deeps target at the Company's Sandstone project in WA.
  - Better bulk tonalite intercepts include **150m at 1.03g/t Au** and **165m at 1.11g/t Au**.
  - Significant new zone of high grade mineralisation identified within banded iron formation (BIF) with a true width intercept of **5m at 21.9g/t Au**, including **2m at 54.0g/t Au**.
  - Shallow gold intercepts returned from basalts along the NE tonalite contact, the best being **93m at 2.57g/t Au** from surface, including **35m at 6.27g/t Au**, and **9m at 5.23g/t Au**.
- The Stage II ore sorting campaign on the Two Mile Hill tonalite deeps deposit demonstrates that the **ore can be significantly upgraded via a combination of Colour and X-ray sensors**, providing further confidence that the technology will deliver significant upside for the project.
- Results confirm **upgrades of between 155% and 213%**, with sorting gold recoveries in the range of 67-93%.
- Multiple gold soil anomalies defined at the Dandaraga and Ned's properties, proximal to Sandstone.
- Infill and extension RC drilling completed at the optioned Wirraminna gold deposit identified deposit extensions at depth.
- Limited maiden RC drilling completed at Sandstone's Cowan prospect.

**Schedule for December quarter 2018:**

- **Two Mile Hill tonalite** - Update open pit and underground Mineral Resource estimates; re-optimize open pit; update underground mining concept study; further large diameter diamond hole for ore sorting trials; possible Stage II diamond drilling.
- **Elsewhere at Sandstone** - Update Mineral Resource estimate and pit optimisation at Wirraminna; possible RC drilling at Davis; systematic auger drilling of southern target area; continue review and negotiation on proximal transactions.

## **Operating Activities**

### **Corporate**

#### **Finances**

Aspiring gold project developer, Middle Island Resources Limited (**ASX:MDI, Middle Island or the Company**), held cash and liquid investments of A\$1.12 million as at 30 September 2018, comprising A\$690,000 in cash and A\$430,000 in Tajiri Resources Corporation (TSXV:TAJ) shares.

#### **Strategy**

At the Company's wholly-owned Sandstone gold project in WA, Middle Island continues to pursue the extension and enhancement of the proposed gold production profile in order to recommission its 100%-owned, on-site processing plant.

The September quarter focus was on Sandstone's Two Mile Hill tonalite deeps deposit, following recognition of the deposit's amenability to pre-concentration of gold mineralisation via ore sorting, thereby increasing the mill feed grade and reducing the mill through-put to a level compatible with the existing processing plant's capacity.

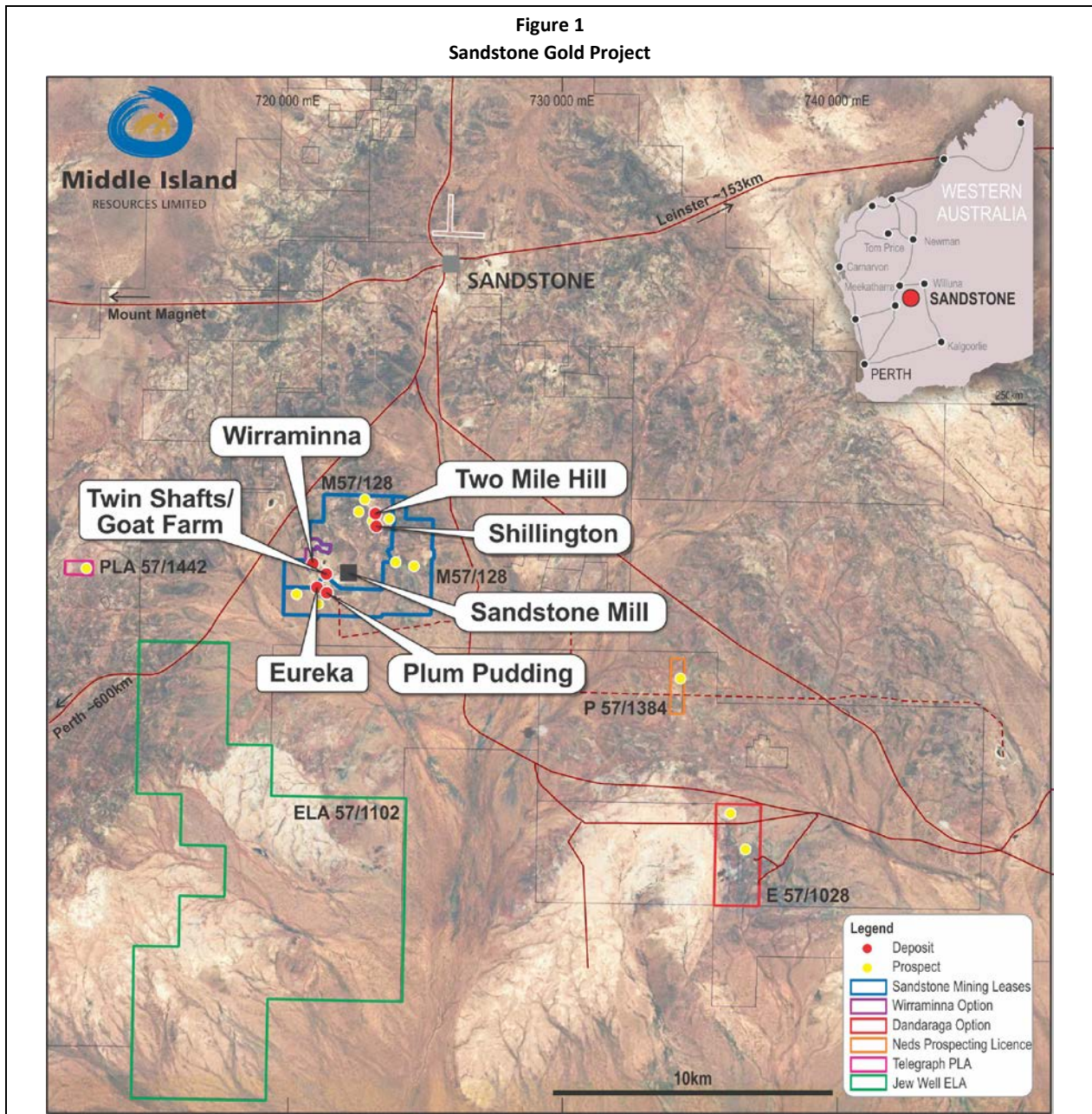
The strategy was further progressed during the September quarter, variously via the following:-

- Receipt and compilation of assays relating to RC pre-collared, resource definition diamond drilling of the upper half of the Two Mile Hill tonalite deeps deposit.
- Receipt and compilation of assay results from further ore sorting testwork on the Two Mile Hill tonalite deeps deposit.
- Receipt and compilation of soil sampling results for the Dandaraga and Ned's properties.
- Completion of infill and extension RC drilling at the optioned Wirraminna gold deposit.
- Completion of maiden RC drilling at the Cowan gold prospect.
- New tenement applications covering the Telegraph and Jew Well properties.
- On-going reviews and negotiations towards consolidation of third-party gold deposits within the broader Sandstone district around the Company's 100%-owned, centrally located, processing plant.

**The Company remains confident that continuing this multi-faceted, strategic approach will ultimately lead to recommissioning and gold production at Sandstone.**

## **Sandstone Gold Project (100%) – Western Australia**

The Sandstone gold project is shown in Figure 1 below.



### **Two Mile Hill Tonalite Deeps Deposit**

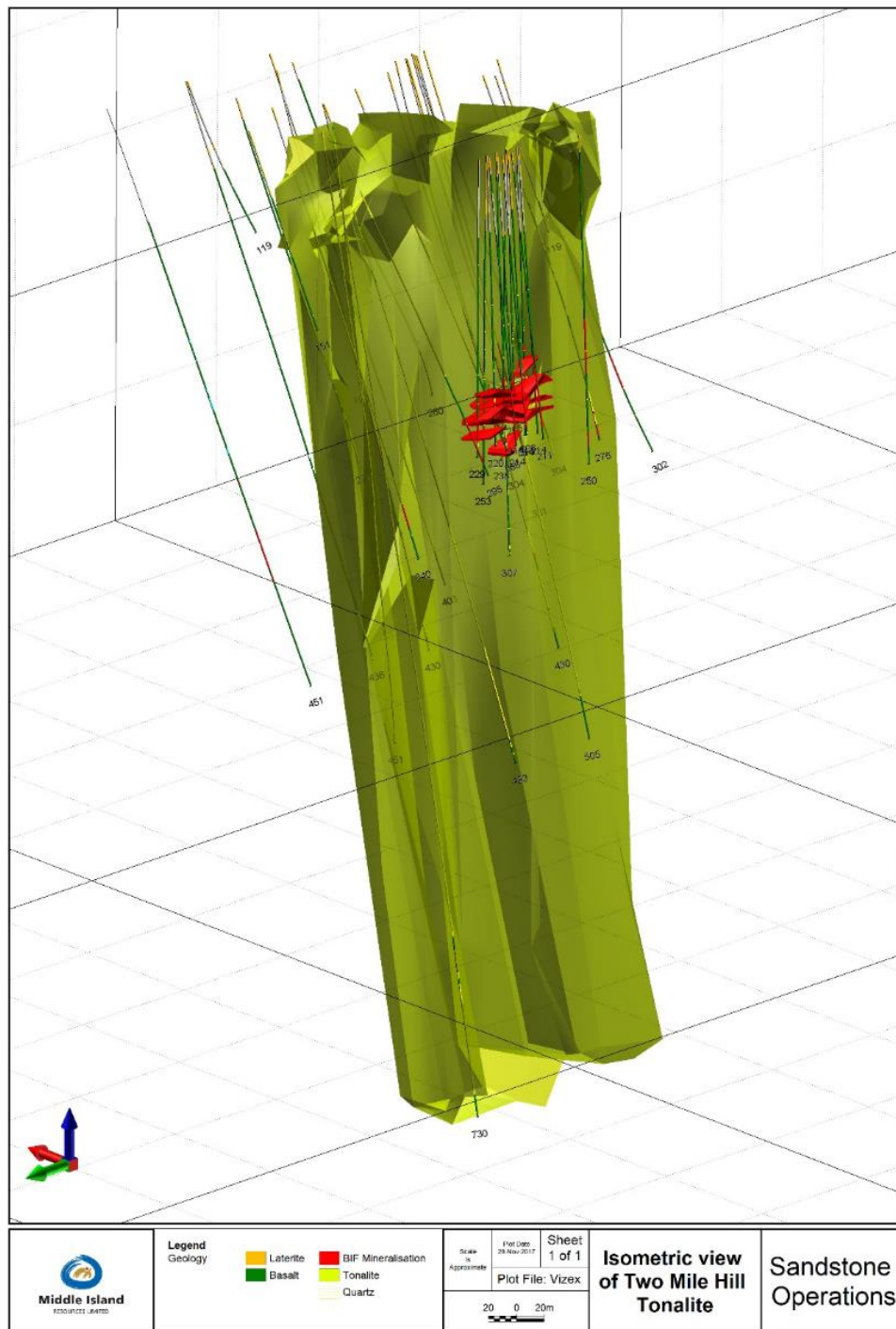
The Two Mile Hill tonalite deeps deposit is located 4km north (via an existing haul road) of the Company's 600,000tpa Sandstone gold processing plant (Figure 1).

Drilling at the Two Mile Hill deeps deposit confirms the presence of a substantial and ubiquitously mineralised system, at surface measuring 250m in strike and up to 90m in width that is mineralised to at least 713m depth and remains open beneath this level (Figure 2). The latest drill intercepts along with encouraging results derived from recent metallurgical, mineralogical and ore sorting testwork, confirms the potential for underground mining beneath the proposed open-pit cutback at Two Mile Hill.



**Figure 2**

An updated isometric model of the Two Mile Hill tonalite deposit (green) and adjacent BIF deposit (red), looking southeast.



### Diamond Drilling

All assays have been received, compiled and reported for Stage 1 RC pre-collared, resource definition diamond drilling on the Two Mile Hill tonalite deeps deposit. This program was focussed exclusively on the upper half of the deeps deposit (from 140m to ~420m below surface) and comprised 7 holes for 2,109.2m, including 994m of RC pre-collar drilling and 1,115.2m of NQ diamond core tails, optimising the existing drilling to the maximum extent possible (refer ASX Release dated 27 August 2018).

In addition to quantifying the upper half of the current Exploration Target (24 to 34Mt at 1.1 to 1.4g/t; 900,000 to 1.5 million ounces of gold) to at least an Inferred Resource status, the holes were designed to optimise the number of intercepts of the upper two banded iron formation (BIF) units, proximal to the tonalite contacts, which are known to host high grade gold mineralisation associated with massive to semi-massive pyrite replacement of magnetite horizons.

*The potential quantity and grade of an Exploration Target is conceptual in nature, as insufficient exploration has been undertaken to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.*

The tonalite results are generally consistent with previous diamond drilling. Better bulk mineralised intervals of tonalite, without reference to cut-off grade or included waste, comprise **150m at 1.03g/t Au** (from 84m depth), **including 34m at 1.85g/t Au** (from 96m depth), in MSDD265. The bulk tonalite intercept in MSDD267 comprised **165m at 1.11g/t Au** (from 85m depth), **including 7m at 4.73g/t, 5m at 6.00g/t and 10m at 3.34g/t Au** (from 123m, 142m and 202m depth respectively), while MSDD263 included **1m at 28.8g/t Au** from 170m depth.

Several intervals of mineralised BIF were also encountered in the drilling, with the most significant being in MSDD262, which intersected a true width interval of **5m at 21.9g/t Au** (from 339m depth), **including 2m at 54.0g/t Au** (from 340m depth) within brecciated BIF.

Better mineralised basalt intervals were derived from MSDD268, which generated an intercept, unconstrained by cut-off grade or included waste, of **93.00m at 2.57g/t Au** from surface to the western tonalite contact at 93m depth, including an interval of **35m at 6.27g/t Au** from 58m depth. Other basalt-hosted intercepts include **9m at 5.23g/t Au** from 85m depth in MSDD265 and **1m at 11.7g/t Au** from 252m depth in MSDD267. Based on these and other shallow results within the basalt, the Two Mile Hill open pit Mineral Resource may well justify re-estimation.

Full details of the Two Mile Hill diamond drilling results and associated JORC Tables are provided in an ASX Release dated 17 August 2018.

### Ore Sorting

Initial ore sorting trials demonstrated that the Two Mile Hill tonalite deeps deposit is amenable to pre-concentration, with a high selectivity of gold mineralisation using Optical (Colour) and X-ray (XRT) sensors. The initial testwork indicated that sorting could deliver a 185%-257% increase in grade, with gold recoveries in excess of 93%, and up to 64% of the sorter feed material being rejected (refer ASX Release of 15 January 2018).

In order to confirm this outcome, a series of four primary (fresh) composites were selected from HQ and PQ diamond core derived from MSDD261, drilled in the March quarter 2018 (refer ASX Release of 26 March 2018). The composites comprised broad, single, continuous intervals of half core over three grade ranges (high grade - HG, medium grade - MG and low grade - LG). The HG composite, derived from half PQ and HQ core, was crushed into two fractions at -45mm/+15mm and -30mm/+10mm to assess the impact of crush size on sorting, while the MG and LG composites were derived from half HQ core and crushed at -30mm/+10mm.

The composites were provided to Steinert for initial sighter and scoping trials using its commercial-scale unit in Perth. Based on the sighter test results, a combination of XRT (to detect and separate higher density sulphides associated with gold) and Optical (to detect and isolate quartz, which hosts the vast majority of gold, on the basis of colour) sensors were confirmed to yield the optimum result.

Especially given the coarse, particulate nature of the majority of gold mineralisation, the various product fractions derived from each composite (along with the fines) were assayed via five 2kg bottle rolls (with residue assays) to determine an average calculated head grade in each case.

While the priority remains on establishing the sorting characteristics of the primary (fresh) material, a partially oxidised composite of half PQ diamond core was also submitted for sorting at a -45/+15mm crush size, in order to assess ore sorting on material derived from the planned Two Mile Hill open pit.

A further scoping trial was undertaken at the TOMRA facility in Sydney (Figure 3), prior to selection of the optimum processing route and unit to undertake the main ore sorting trial, with an Optical (Colour) sensor appearing to provide the optimum outcome. Based on the results from the scoping trials, TOMRA was selected to undertake the bulk composite trials at the end of the June quarter.

**Figure 3**

**Commercial-scale ore sorting of Two Mile Hill composites at the TOMRA facility in Sydney, with the Colour accepts (predominantly mineralised quartz vein material) belt on the left and rejects (predominantly unmineralised tonalite) on the right.**



The fraction assay results, received and reported in the September quarter, indicate that:

- Sorting of the Primary Composites resulted in grade increases to the sorted concentrate in the range of 155% to 213%.
- A combination of Colour and X-ray sensors delivered the sorting outcomes, with the majority of the gold selected by way of colour (optical) differentiation.
- Gold sorting recoveries for Primary Composites ranged from 67-93%.
- Further work is required to establish what factors give rise to the variance in recoveries between composites.

- Primary composite sorting yields (percentage of feed reporting to product) ranged from 39% to 51%; a range of yields is to be expected and can be controlled in a commercial operation via sensor settings on the sorting unit.
- The quantity of gold reporting to fines is variable and likely skewed by nuggetty mineralisation. However, it is anticipated that the fines will generally be upgraded, and therefore included in the accepted feed.
- The sorting outcome on the basis of crush size remains equivocal due to the single composite comparison, presence of coarse gold and iron-staining in Primary Composite A, requiring further optimisation.
- The oxide material was tested using an XRT sensor only, with little to no evident benefit.

While the TOMRA commercial scale Laser sorting unit had not been installed at the time of the trials, limited unidirectional, bench-scale, laser testing of selected samples indicated that quartz grains comprising the tonalite itself can be readily distinguished from mineralised quartz vein material. Based on the limited Laser testing undertaken, a further grade improvement factor of approximately 5-10% is considered likely.

During the sorting trials it was noted that fragments of un-veined tonalite (therefore notionally unmineralised) were reporting to the accepted Colour fraction in each case. Closer examination of this material indicated that peripheral 'bruising' (and development of a white rock flour) during the crushing process was responsible for this material reporting to (and diluting) the Colour accepts fractions. Bench-scale testwork indicates that this material would be readily discriminated and rejected via sorting using a Laser sensor.

The results of the ore sorting trials, along with the refined block model derived from resource estimation (in progress), will be applied in updating the underground mining concept study. Depending on the findings of the up-dated underground mining concept study to be completed in the December quarter, a further PQ diamond hole will be completed to provide material for further bulk ore sorting trials. Stage III ore sorting testwork is planned to focus on aspects of recovery variability and anticipated enhancements utilising TOMRA's recently commissioned, commercial-scale, Laser sorting unit.

Full details of the bulk ore sorting trials and applicable JORC Tables are provided in an ASX Release dated 30 July 2018.

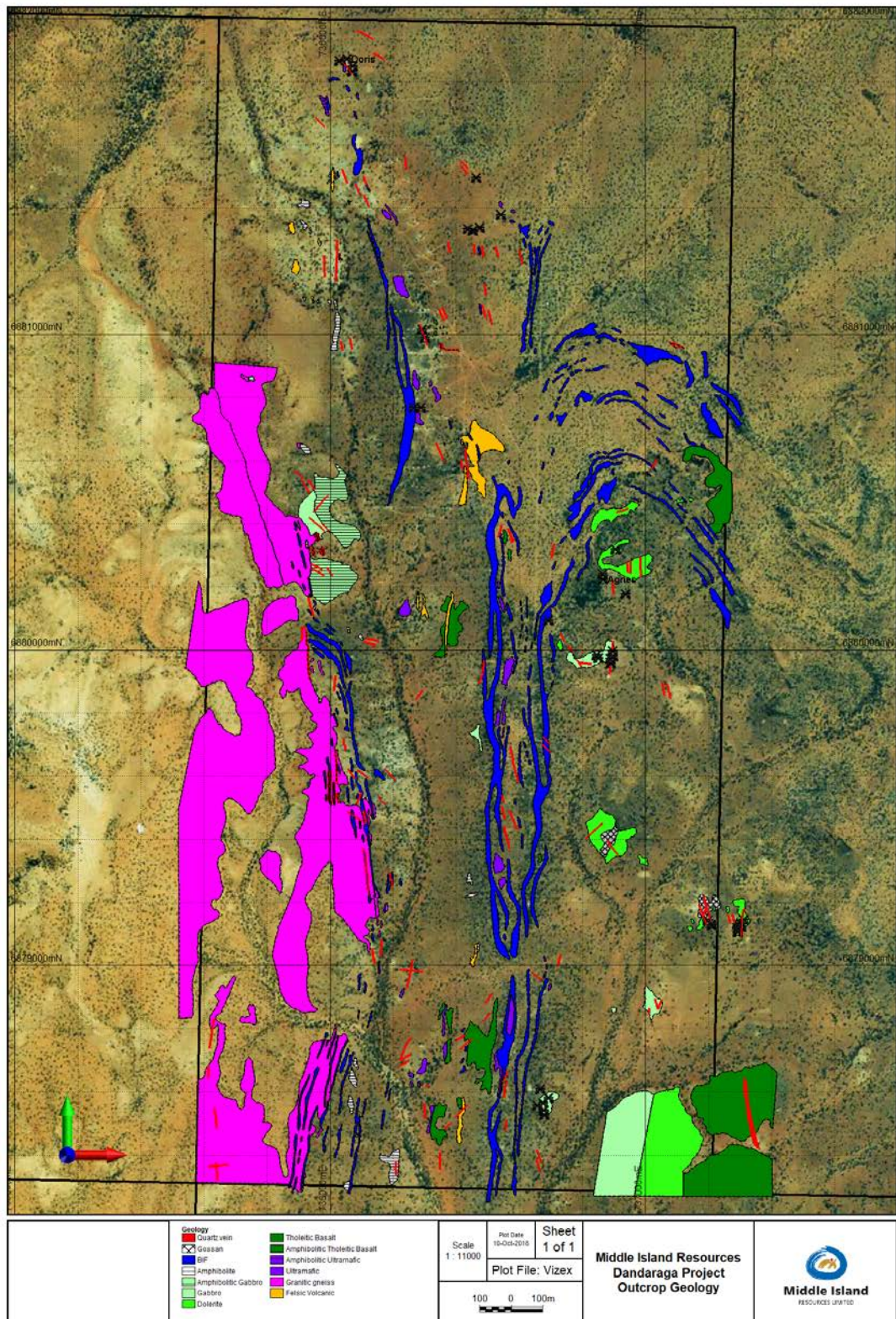
### **Dandaraga Mapping and Soil Sampling**

The Dandaraga property comprises E57/1028, located 18km southeast of the Sandstone processing plant. Middle Island has an Option Agreement to acquire a 100% interest in E57/1028 from SLS Exploration Pty Ltd. A campaign of detailed geological mapping, chip sampling and soils sampling was completed at Dandaraga during the June quarter.

Geological mapping defined a succession of predominantly east-dipping gabbros, dolerites, basalts, ultramafics and BIFs that have been folded into a series of steeply north-northeast plunging synclines and anticlines (Figure 4). The eastern margin of the succession has been variably assimilated by gneissic rocks of the Diemals Dome. The metamorphic grade is predominantly greenschist facies, increasing to amphibolite facies proximal to the Diemals Dome contact. In addition to the known mineralisation and historic workings, several areas of potential economic interest were identified.



**Figure 4**  
**Dandaraga Property – Outcrop Geology**



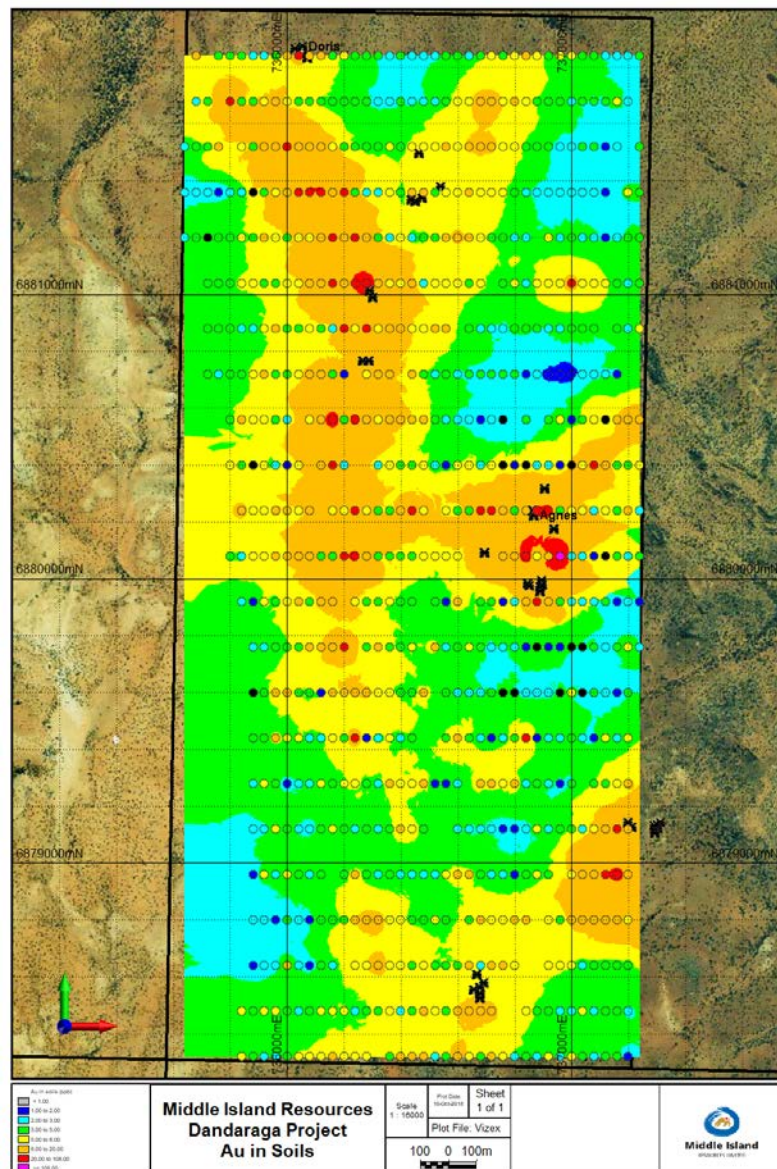


The soil sampling was completed late in the June quarter on a 160m x 40m pattern. The top of the more calcareous, 'B' horizon was targeted for sampling, with samples screened at -80# (180 microns) to generate ~200g of material at each site. The soil samples were submitted for assay early in July.

The soil sample results define three distinct gold anomalies (Figure 5) as follows:-

- **Agnes** - a 600m x 400m cohesive, high tenor (peak value of 108ppb Au), gold anomaly, broadly coincident with and extending beyond the Agnes workings, which is interpreted to reflect stockwork gold mineralisation within dolerite and BIF.
- **Cork Tree** – a 600m x 200m cohesive, moderate tenor (peak value of 41ppb Au), gold anomaly, coincident with (but centred south of) the Cork Tree gold workings, proximal to the southeast boundary of E57/1028.
- **Central** – a 2.5km x 300m persistent, cohesive, moderate tenor (peak value 64ppb Au), gold anomaly, consistent with a ridge of BIF, extending from near the northern tenement boundary to the south-central portion of E57/1028.

**Figure 5**  
**Imaged gold soil geochemistry for the Dandaraga property**



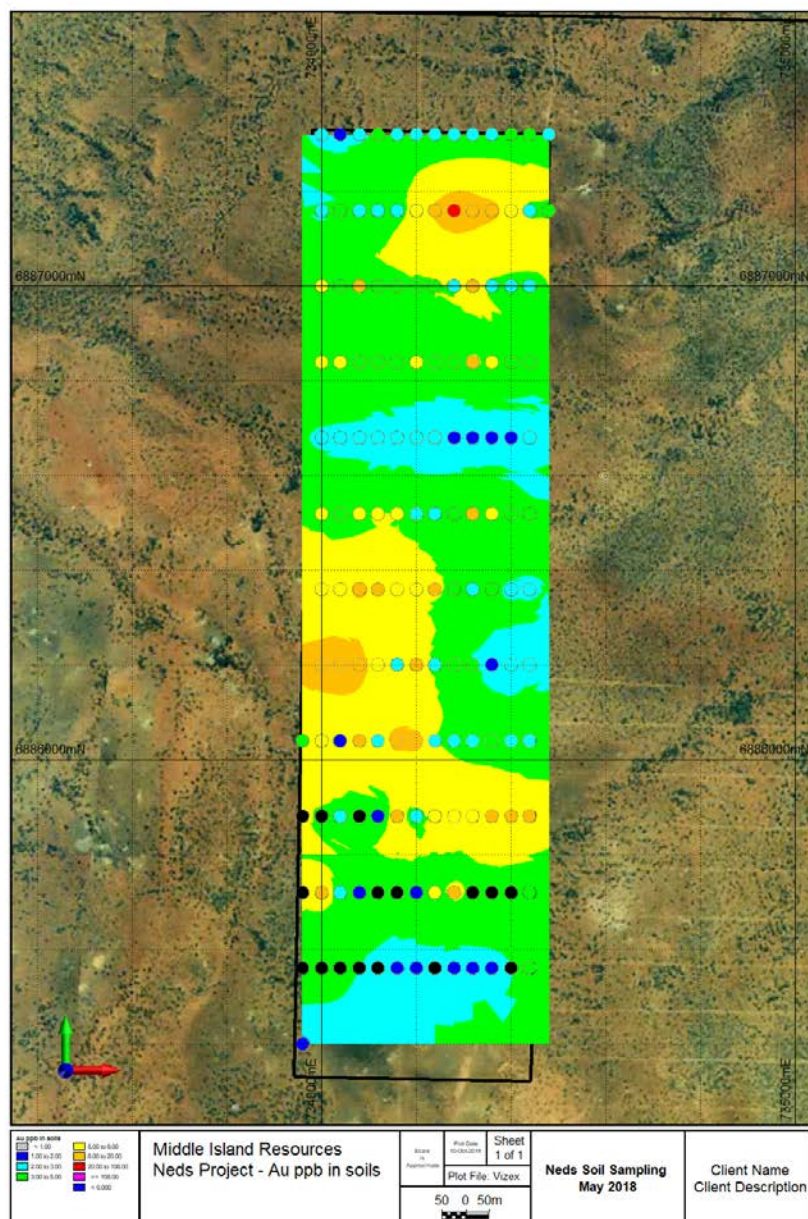
### Ned's Soil Sampling

The Ned's property comprises P57/1384, a 100% interest in which was acquired for \$500 cash early in 2018.

A programme of detailed soil sampling was completed early in the September quarter on a 160m x 40m pattern. The top of the more calcareous, 'B' horizon was targeted for sampling, with samples screened at -80# (180 microns) to generate ~200g of material at each site.

The soil sample results define a distinct, moderate tenor (peak value 24ppb Au) gold anomaly, measuring approximately 300m x 300m, in the central-northern portion of the tenement and a further weaker gold anomaly (peak value 16ppb Au), measuring some 800m x 300m, in the central-western portion of the tenement (Figure 6).

**Figure 6**  
**Imaged gold soil geochemistry for the Ned's property**



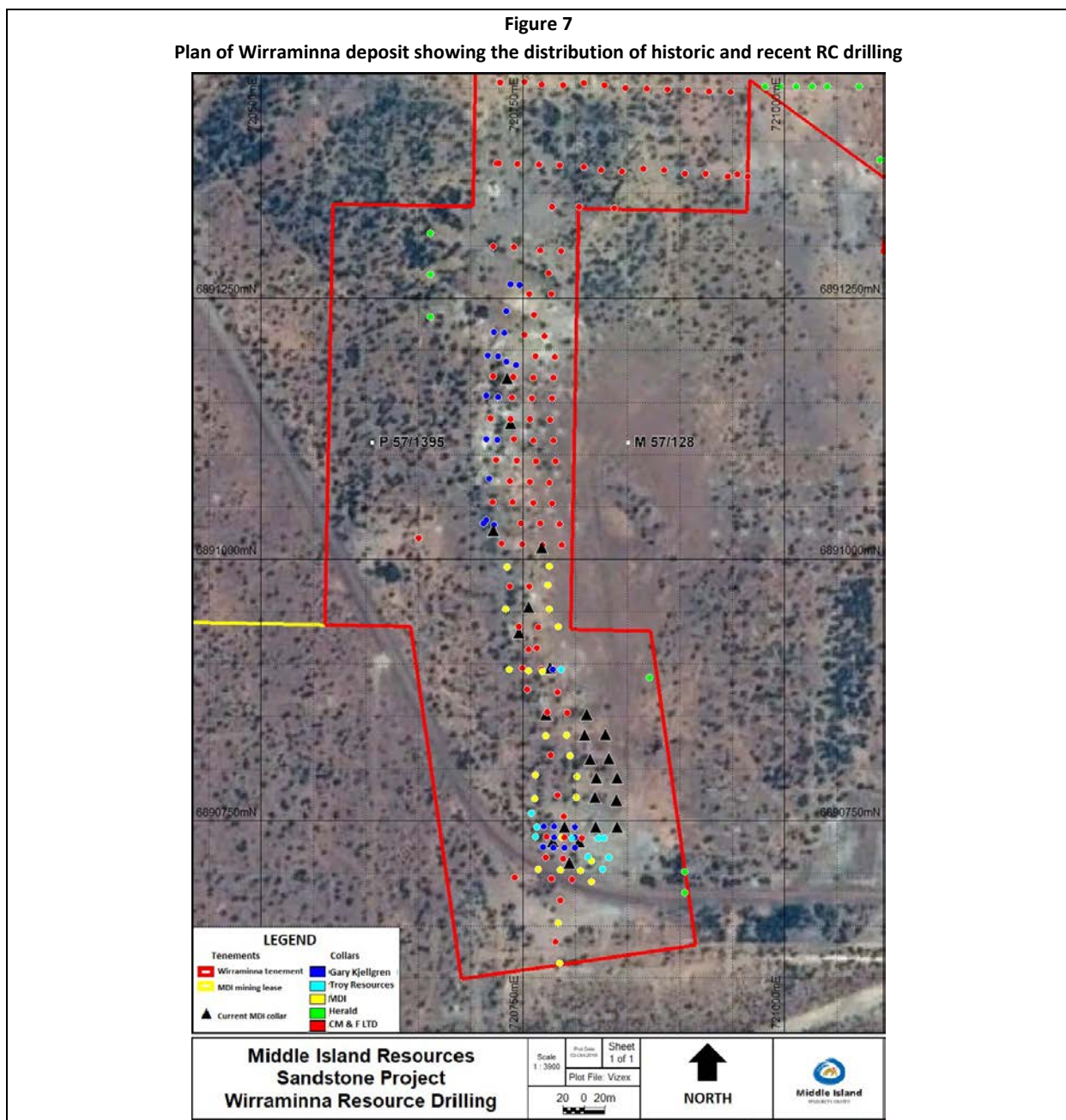


### Wirraminna RC Drilling

The Wirraminna deposit is associated with a steeply east dipping and north trending, ferruginous quartz lode that remains open at depth and to a lesser extent along strike. The recent drilling programme was designed to variously verify, infill, and extend the existing Wirraminna gold deposit.

The existing Mineral Resource estimate for the Wirraminna deposit is 550,000t at 1.3g/t Au for 23,000oz gold (at a 0.5g/t Au lower cut-off grade), some 55% of which is classified as an Indicated Mineral Resource, whilst the balance is in the Inferred category (refer ASX Release dated 8 December 2017).

Twenty-three RC drill holes (MSRC269 - MSRC291), comprising 1,944m, were completed at the Wirraminna deposit during August 2018 (Figure 7). All assays were pending at quarter's end but have subsequently been announced (refer ASX Release dated 8 October 2018).





**Cowan RC Drilling**

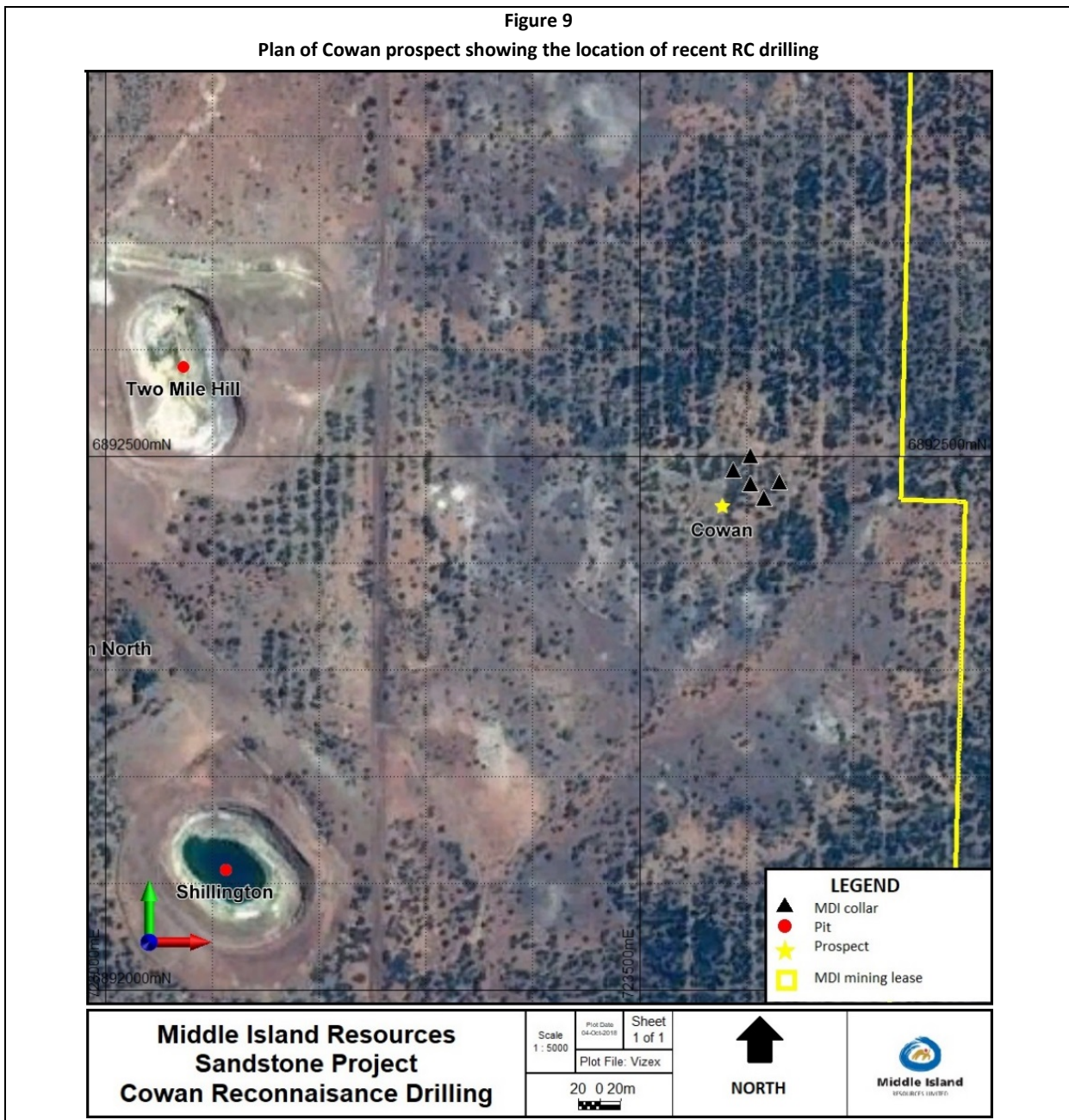
The Cowan prospect is a recently discovered, northwest trending, quartz vein, located approximately 500m east of the Two Mile Hill deposit. The vein was exposed over a 100m length by the Company's tribute prospector who recovered fresh, primary gold nuggets from this location (Figure 8), identifying the vein as the likely source of the gold.

**Figure 8**  
**Gold nuggets recovered from the Cowan Prospect**



Five reconnaissance RC drill holes (MSRC292-MSRC296) comprising 300m, were drilled on three sections at the Cowan prospect during September 2018 (Figure 9). The holes were designed to determine the position, orientation and mineral potential of the quartz vein.

All five holes intersected a 2-3m thick vein of translucent, white quartz, which appears to strike NNW and dips at ~45° to the ENE. All assays were pending at quarter's end but have subsequently been announced (refer ASX Release dated 8 October 2018).



### **New Tenement Applications**

A successful application was made for P57/1442 (Telegraph), located 9km west of the Sandstone processing plant and covering an area of 0.52km<sup>2</sup>. The tenement incorporates a zone of stockwork quartz veining within dolerites and gabbros that has been heavily prospected, but remains undrilled.

A successful application has been made for E57/1102 (Jew Well), located 10km southwest of the Sandstone processing plant and covering an area of 158.4km<sup>2</sup>. The tenement incorporates the southwestern extremity of the Sandstone greenstone belt (largely veneered by transported cover), lying to the east of and straddling the Youanmi Fault.

The formal granting of the Telegraph and Jew Well applications (Figure 1) is subject only to heritage clearance in each case.



### **Tribute Gold Production**

Tribute gold nugget production derived from M57/128 and M57/129 during the September quarter was 6.8oz, of which Middle Island's share was 1.02oz, the majority of which was derived from the Two Mile Hill, Macintyre and Cork Tree areas. This brings aggregate gold tribute production since commencing the agreement in 2017 to 287oz, of which Middle Island's share is 42.2oz.

### **Planned 2018 December Quarter Activities**

Subject to available funding, activities planned at the Sandstone Project for the December quarter variously comprise:-

#### **Two Mile Hill Tonalite**

- Update Mineral Resource estimate for upper half of the tonalite deeps Exploration Target.
- Update underground mining concept study to incorporate new block model, new ore sorting results and geotechnical testwork.
- Update Two Mile Hill open pit Mineral Resource and pit optimisation.
- Subject to the outcome of above, commencement of a further large diameter diamond hole to provide material for a third ore sorting campaign and possible commencement of Stage II resource definition diamond drilling.

#### **Wirraminna**

- Update the Wirraminna Mineral Resource estimate and pit optimisation.

#### **Davis**

- Possible limited follow-up RC drilling.

#### **Other**

- Commence systematic auger drilling of greenfields targets identified beneath transported cover in the vicinity of the processing plant.
- Continue to review and negotiate other proximal gold consolidation transactions.



## **Safety, Environmental & Social**

### **Health, Safety & Environment**

No injuries, safety or environmental incidents were recorded at the Company's projects and premises during the September quarter.

Notices received as a result of the WA Department of Mines, Industry Regulation and Safety environmental and safety audit of the Sandstone gold project during the June quarter have all been rectified, reported and accepted.

Rehabilitation of disturbed areas at the Sandstone gold project, primarily drill sites, is being progressively undertaken in accordance with POW and environmental audit requirements.

Safety signage, crest bunds and restricted access areas associated with the open pits and the processing plant are being regularly monitored and maintained.

### **Social**

The Company continues to engage with the Shire of Sandstone, pastoralists and the local community. This process includes the procurement of labour, materials and services locally, wherever practically possible and, most recently, sponsorship of the Sandstone Art Exhibition.

#### **COMPANY CONTACTS:**

Rick Yeates – Managing Director +61 (0)401 694 313

#### **MEDIA CONTACT:**

Kevin Skinner Field Public Relations +61 (0)8 8234 9555 / +61 (0)414 822 631

WEBSITE: [www.middleisland.com.au](http://www.middleisland.com.au)

### **Forward Looking Statements**

Certain statements made during or in connection with this communication, including, without limitation, those concerning the economic outlook for the mining industry, expectations regarding gold prices, exploration costs and other operating results, growth prospects and the outlook of Middle Island's operations contain or comprise certain forward looking statements regarding Middle Island's exploration operations, economic performance and financial condition. Although Middle Island believes that the expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to have been correct.

Accordingly, results could differ materially from those set out in the forward looking statements as a result of, among other factors, changes in economic and market conditions, success of business and operating initiatives, changes that could result from future acquisitions of new exploration properties, the risks and hazards inherent in the mining business (including industrial accidents, environmental hazards or geologically related conditions), changes in the regulatory environment and other government actions, risks inherent in the ownership, exploration and operation of or investment in mining properties in foreign countries, fluctuations in gold prices and exchange rates and business and operations risks management, as well as generally those additional factors set forth in our periodic filings with ASX. Middle Island undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events.

### **Competent Persons' Statement**

Information in this report relates to exploration results that are based on information compiled by Mr Rick Yeates (Member of the Australasian Institute of Mining and Metallurgy). Mr Yeates is a fulltime employee of Middle Island and has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activities undertaken to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Yeates consents to the inclusion in the release of the statements based on his information in the form and context in which they appear.



Middle Island Resources Limited advises the following information required under ASX Listing Rule 5.3.3 as at 30 September 2018:

***Mining Tenements***

Tenements	Mining tenements acquired during the quarter	Mining tenements disposed during the quarter	Mining tenements held at the end of the quarter	Tenement location
Pouni II	-	Under option to divest 100%	100%	Burkina Faso
Dassa	-	Under option to divest 100%	100%	Burkina Faso
Didyr	-	Under option to divest 100%	100%	Burkina Faso
Dassa Sud	-	Under option to divest 100%	100% - extension pending	Burkina Faso
Nebya	-	Under option to divest 100%	100% - awaiting transfer	Burkina Faso
Gossina	-	Under option to divest 100%	100% - extension pending	Burkina Faso
M57/128	-	-	100%	Western Australia
M57/129	-	-	100%	Western Australia
P57/1395	-	-	Option to acquire 100%	Western Australia
P57/1384	-	-	100%	Western Australia
E57/1028	-	-	Option to acquire 100%	Western Australia
P57/1442	Application pending	-	100%	Western Australia
E57/1102	Application pending	-	100%	Western Australia

Visit [www.middleisland.com.au](http://www.middleisland.com.au) for further information and announcements.